# **SIEMENS**

### Data sheet

### 3VA1125-6GE46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=25A OVERLOAD PROTECTION IR=17,5A ...25A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION 100% CABLE CONNECTION

Figure similar

| Model                                       |                             |  |
|---|-----------------------------|--|
| product brand name                          | SENTRON                     |  |
| Product designation                         | Molded case circuit breaker |  |
| Design of the product                       | Line protection             |  |
| Product variations                          | General Applications        |  |
| Ground fault monitoring version             | Without                     |  |
| Design of the auxiliary release             | Without auxiliary release   |  |
| Design of the auxiliary switch              | Without                     |  |
| Design of the operating mechanism           | toggle handle               |  |
| Type of the driving mechanism / motor drive | No                          |  |
| Design of the overcurrent release           | TM220                       |  |

| General technical data  |  |        |
|---|--|--------|
| Number of poles   |  | 4      |
| Trip class / of the L-trip / with I2t characteristic / initial value    |  | 1      |
| Trip class / of the L-trip / with I2t characteristic / Full-scale value |  | 1      |
| Electrical endurance (switching cycles)                                 |  |        |
| • at AC-1 / at 380/415 V / at 50/60 Hz                                  |  | 8 000  |
| circuit-breaker / Design  |  | 3VA    |
| Mechanical service life (switching cycles) / typical                    |  | 15 000 |

| Voltage                          |   |     |
|----------------------------------|---|-----|
| Insulation voltage / Rated value | V | 800 |
|                                  |   |     |

#### Protection class

| Protective function of the overcurrent release  LI  Switching capacity Switching capacity class of the circuit breaker  H  Dissipation  Active power loss  • maximum  W  8.5  Electricity Continuous current / Rated value / maximum A 160  Continuous current / Rated value a 25  Adjustable response value current • of the current-dependent overload release / Full-scale value of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 60 °C - Rated va | Protection class IP                             |   | IP40              |
|--|---|---|-------------------|
| Switching capacity class of the circuit breaker H  Dissipation  Active power loss  • maximum W 8.5  Electricity  Continuous current / Rated value / maximum A 160  Continuous current / Rated value A 25  Adjustable response value current  • of the current-dependent overload release / Full-scale value  • of the current-dependent overload release / initial value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value V 690  • for DC / Rated value V 600  Operating current  • at 40 °C / Rated value A 25  • at 55 °C / Rated value A 25  • at 65 °C / Rated value A 24  • at 65 °C / Rated value A 23  • at 67 °C / Rated value A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Output Department  Adjustable parameters  Adjustable parameters  Adjustable parameters  Adjustable parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value   | Protection class IP / on the front              |   | IP40              |
| Switching capacity class of the circuit breaker    Dissipation   Active power loss   • maximum   W   8.5   | Protective function of the overcurrent release  |   | LI                |
| Switching capacity class of the circuit breaker    Dissipation   Active power loss   • maximum   W   8.5   | Switching capacity                              |   |                   |
| Active power loss  |   |   | Н                 |
| Active power loss  | Dissipation                                     |   |                   |
| Electricity  Continuous current / Rated value / maximum  A 160  Continuous current / Rated value  Adjustable response value current  • of the current-dependent overload release / A 1  Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  A 25  • at 50 °C / Rated value  A 25  • at 50 °C / Rated value  A 24  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Osurtability  Suitability  Suitability Full-scale value  • of I-trip / Full-scale value  | ·   |   |                   |
| Continuous current / Rated value / maximum   | • maximum                                       | W | 8.5               |
| Continuous current / Rated value  Adjustable response value current  of the current-dependent overload release / Full-scale value  of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of or DC / Rated value  value  Operating current  at 40 °C / Rated value  A 25  at 50 °C / Rated value  A 25  at 50 °C / Rated value  A 24  at 60 °C / Rated value  at 60 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Adjustable parameters  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 10  A 10  | Electricity                                     |   |                   |
| Adjustable response value current  • of the current-dependent overload release / Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10  | Continuous current / Rated value / maximum      | А | 160               |
| of the current-dependent overload release / Full-scale value     of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage     with AC / at 50/60 Hz / Rated value     v 690     of DC / Rated value     v 600  Operating current     at 40 °C / Rated value     A 25     at 55 °C / Rated value     at 55 °C / Rated value     at 60 °C / Rated value     at 70 °C / Rated value     at 70 °C / Rated value     A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current     of I-trip / Full-scale value  A 10  | Continuous current / Rated value                | Α | 25                |
| Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10  | Adjustable response value current               |   |                   |
| Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • to 7 C / Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 670 °C / Rated value  • at 68 °C / Rated value  • at 69 °C / Rated value  • at 70 °C / Rated value  • at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10  |   | Α | 1                 |
| Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  V 600  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  A 24  • at 65 °C / Rated value  • at 70 °C / Rated value  A 23  • at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10   |   | Α | 10                |
| with AC / at 50/60 Hz / Rated value     for DC / Rated value     v 600  Operating current     at 40 °C / Rated value     A 25     at 50 °C / Rated value     A 25     at 65 °C / Rated value     A 24     at 60 °C / Rated value     A 24     at 65 °C / Rated value     A 23     at 70 °C / Rated value     A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current     of I-trip / Full-scale value  A 10   | Main circuit                                    |   |                   |
| for DC / Rated value         V 600  Operating current         at 40 °C / Rated value         at 50 °C / Rated value         at 55 °C / Rated value         at 60 °C / Rated value         at 60 °C / Rated value         at 65 °C / Rated value         at 65 °C / Rated value         at 65 °C / Rated value         at 70 °C / Rated value         A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current         of I-trip / Full-scale value  A 10   | Operating voltage                               |   |                   |
| Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of l-trip / Full-scale value  A 25  A 24  A 23  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Adjustable parameters  Adjustable response value current  • of l-trip / Full-scale value  A 10   | • with AC / at 50/60 Hz / Rated value           | V | 690               |
| at 40 °C / Rated value  at 50 °C / Rated value  at 55 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 25  A 24  A 24  A 23  A 23  A 25  A 24  A 23  A 24  A 23  A 25  A 24  A 23  A 25  A 24  A 23  A 26  A 27  A 28  A 28  A 29  A 29  A 20  A 20  A 20  A 21  A 20  A 21  A 20  A 21  A 21  A 22  A 23  A 24  A 23  A 24  A 24  A 23  A 24  A 23  A 24  A 23  A 24  A 24  A 23  A 24  A 24  A 23  A 24  A 24  A 24  A 24  A 24  A 23  A 24  A 23  A 24  A 23  A 24  A 24  A 23  A 24  A 24  A 24  A 24  A 23  A 24  A 24  A 23  A 24  A 28  A  | • for DC / Rated value                          | V | 600               |
| at 50 °C / Rated value  at 55 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  A 23  at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 25  A 24  A 23  A 23  A 23  A 23  | Operating current                               |   |                   |
| at 55 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  A 23  at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 24  A 23  A 23  A 23  Auxiliary circuit  A 23  Auxiliary circuit  A 23  Auxiliary circuit  A 10   | • at 40 °C / Rated value                        | Α | 25                |
| <ul> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 70 °C / Rated value</li> <li>A 23</li> </ul> Auxiliary circuit Number of CO contacts / for auxiliary contacts <ul> <li>Suitability</li> <li>Suitability for use</li> <li>system protection</li> </ul> Adjustable parameters Adjustable response value current <ul> <li>of I-trip / Full-scale value</li> <li>A 10</li> </ul>   | • at 50 °C / Rated value                        | Α | 25                |
| at 65 °C / Rated value  at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 23  A 23  A 10  | • at 55 °C / Rated value                        | Α | 24                |
| at 70 °C / Rated value  A 23  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10  | • at 60 °C / Rated value                        | Α | 24                |
| Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10   | • at 65 °C / Rated value                        | Α | 23                |
| Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10  | • at 70 °C / Rated value                        | Α | 23                |
| Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10   | Auxiliary circuit                               |   |                   |
| Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10  |   |   | 0                 |
| Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10  | Suitability                                     |   |                   |
| Adjustable response value current  ● of I-trip / Full-scale value  A 10  |   |   | system protection |
| Adjustable response value current  ● of I-trip / Full-scale value  A 10  | Adjustable parameters                           |   |                   |
|  |   |   |                   |
| • for N conductor protection / initial value   | • of I-trip / Full-scale value                  | Α | 10                |
| lor in-conductor protection / initial value  | • for N-conductor protection / initial value    | Α | 100               |
| ● for N-conductor protection / Full-scale value A 100  | • for N-conductor protection / Full-scale value | Α | 100               |
| Adjustable response value current / of the current- dependent overload release / initial value   | •   | А | 0.7               |
| Product details  | Product details                                 |   |                   |
| Product component  |   |   |                   |

|   |    | NI                 |
|---|----|--------------------|
| Trip indicator  |    | No                 |
| • display   |    | No                 |
| Voltage trigger   |    | No                 |
| undervoltage release  |    | No                 |
| <ul> <li>undervoltage release with leading contact</li> </ul>   |    | No                 |
| Product property  |    |                    |
| <ul> <li>for neutral conductors /<br/>upgradeable/retrofittable / Short-circuit and<br/>overload proof</li> </ul> |    | No                 |
| Product expansion / optional / motor drive  |    | Yes                |
|   |    |                    |
| Product function  Product function  |    |                    |
|   |    | Yes                |
| Intrinsic device protection   |    | No                 |
| • communication function  |    |                    |
| Phase failure detection   |    | No                 |
| <ul> <li>other measurement function</li> </ul>  |    | No                 |
| Accessories   |    |                    |
| Manufacturer article number / of the supplied basic   |    | 3VA1125-6GE46-0AA0 |
| switch  |    |                    |
| Short circuit   |    |                    |
| Operational short-circuit current breaking capacity   |    |                    |
| (Ics)   |    |                    |
| • at 240 V / Rated value  | kA | 100                |
| • at 415 V / Rated value  | kA | 70                 |
| • at 440 V / Rated value  | kA | 36                 |
| ● at 500 V / Rated value  | kA | 15                 |
| ● at 690 V / Rated value  | kA | 5                  |
| Maximum short-circuit current breaking capacity (Icu)   |    |                    |
| • at 240 V / Rated value  | kA | 100                |
| ● at 415 V / Rated value  | kA | 70                 |
| • at 440 V / Rated value  | kA | 36                 |
| • at 500 V / Rated value  | kA | 20                 |
| • at 690 V / Rated value  | kA | 10                 |
| Short-circuit current making capacity (lcm)   |    |                    |
| • at 240 V / Rated value  | kA | 220                |
| • at 415 V / Rated value  | kA | 154                |
| • at 690 V / Rated value  | kA | 17                 |
| Connections   |    |                    |
| Arrangement of electrical connectors / for main   |    | Front terminal     |
| current circuit   |    |                    |
| Type of connectable conductor cross-section   |    |                    |

| <ul> <li>of the round conductor terminal / stranded</li> </ul> |    | 1 x (1.5 - 70 mm²) |
|--|----|--------------------|
| Type of electrical connection / for main current circuit       |    | Box terminal       |
| Mechanical Design  |    |                    |
| Height   | mm | 130                |
| Width  | mm | 101.6              |
| Depth  | mm | 70                 |
| Mounting type  |    | fixed mounting     |
| Environmental conditions                                       |    |                    |
| Ambient temperature  |    |                    |
| <ul><li>during operation / minimum</li></ul>                   | °C | -25                |
| <ul><li>during operation / maximum</li></ul>                   | °C | 70                 |
| during storage / minimum                                       | °C | -40                |
| <ul><li>during storage / maximum</li></ul>                     | °C | 80                 |
| Certificates   |    |                    |
| Equipment marking  |    |                    |
| • acc. to DIN EN 61346-2                                       |    | Q                  |
|  |    |                    |

General

**Product** 

**Approval** 

other

**EMC** 



**Declaration of** 

Conformity



Q

**Shipping Approval** 



other

other

## Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/lowvoltage/catalogs

• acc. to DIN EN 81346-2

Industry Mall (Online ordering system)
https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA11256GE460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11256GE460AA0/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

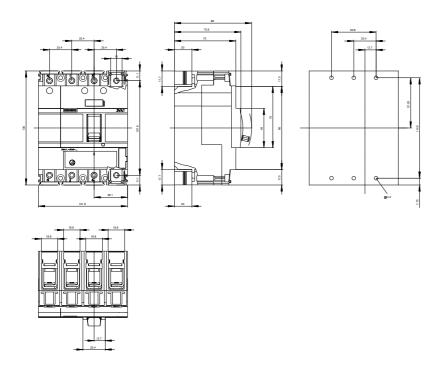
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11256GE460AA0

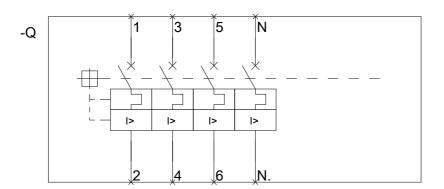
**CAx-Online-Generator** 

http://www.siemens.com/cax

**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv





last modified: 11.03.2015